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Records and descriptions of *Anisops* Spinola, 1840 from Namibia and South Africa (Hemiptera: Notonectidae)

by

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ABSTRACT

The Namibian and South African representatives of the notonectid genus *Anisops* Spinola, 1840 are dealt with. Two new species, *A. arnoldi* (Namibia) and *A. londti* (South Africa), are described and a key for the separation of all 23 species is presented.

INTRODUCTION

The primary purpose of this paper is to compile and revise previous knowledge concerning the genus *Anisops* in Namibia (N) and the Republic of South Africa (RSA) and to present additional information made available by the present study. The impetus for this study was provided by material collected during an expedition to the two above countries in October 1981, with fellow aquatic entomologist Dr Charles L. Hogue (C.L.H.), from specimens collected by Hogue in Namibia in 1972, and from material sent to me (F.S.T.) by Dr Jason Londt of the Natal Museum, Pietermaritzburg, South Africa.

Prior to this work, 19 species of *Anisops* were known to occur in South Africa and six in Namibia. Two new species are described in this paper, one each from South Africa (*A. londti*) and Namibia (*A. arnoldi*). One species from South Africa (*A. graciloides* Brooks) and two from Namibia (*A. graciloides* Brooks and *A. ares* Hutchinson) are recorded for the first time in these countries. Therefore, up to and including this paper (exclusive of synonyms), there are 21 species known from South Africa and nine from Namibia (all but *A. apicalis* Stål, 1855 and *A. arnoldi* sp. n. occur also in South Africa). For the Republic of South Africa the species are: *aglaia* Hutchinson, 1929, *sardea* Herrich-Shaffer, 1849, *poweri* Hutchinson, 1929, *psyche* Hutchinson, 1928, *jaczewskii* Hutchinson, 1928, *letitia* Hutchinson, 1929, *gracilis* Hutchinson, 1929, *graciloides* Brooks, 1951 *debilis* Gerstaecker, 1873, *varia* Fieber, 1851, *praetexta* Hutchinson, 1929, *hypatia* Hutchinson, 1929, *ares* Hutchinson, 1928, *londti* sp. n., *balcis* Hutchinson, 1930, *krugeri* Poisson, 1955, *komghai* Reichart, 1980, *kampalensis* Hutchinson, 1928, *hancocki* Hutchinson, 1928, *amaryllis* Hutchinson, 1928, *pellucens* Gerstaecker, 1873. For Namibia the species are: *apicalis* Stål, *sardea* Herrich-Schaffer, *varia* Fieber, *ares* Hutchinson, *debilis* Gerstaecker, *graciloides* Brooks, *arnoldi* sp. n., *hancocki* Hutchinson, *psyche* Hutchinson.

Holotypes and allotypes of the new species are in the collections of the Natural

History Museum of Los Angeles County, Los Angeles, California and the Natal Museum (NM), Pietermaritzburg, South Africa.

A literature review indicates four publications that are basic to any work on the *Anisops* of Namibia and South Africa. These are G. Evelyn Hutchinson's "A Revision of the Notonectidae and Corixidae of South Africa" (1929), his 1928 work, "On Notonectidae from Central Africa (Hemiptera-Heretoptera)", George T. Brooks's "A Revision of the Genus *Anisops* (Notonectidae, Hemiptera)" (1951) and Raymond A. Poisson's "Catalogue des Insectes Hétéroptères Notonectidae Leach 1815, africano-malgaches" (1966). Before Hutchinson's 1929 work, no adequate investigations of the notonectids had been made in this area of Africa. He included all the countries south of the Zambesi and Kunene rivers in his study, satisfactorily delineating those species recorded from the present Republic of South Africa and Namibia. He recorded five previously described species and six new species for a total of 11 for South Africa. Also, he reported three species for Namibia.

The only other definitive work involving *Anisops* from Namibia and South Africa is Brooks's 1951 study which is a world-wide revision of the genus. Brooks recorded ten species from South Africa. He failed to include two species (*A. psyche* and *A. praetexta*) that Hutchinson recorded in 1929 but he lists one species (*A. ares*) not reported by Hutchinson. He lists only one species (*A. apicalis*) for Namibia, failing again to include two previously recorded species (*A. sardea* and *A. varia*) by Hutchinson. Both Hutchinson and Brooks included keys in their papers.

Subsequent to Brooks's 1951 revision of the genus, papers have appeared describing new species and records from these two countries. These include two papers by Poisson (1955 1957) and one by Reichart (1980).

SYSTEMATICS ACCOUNT

Techniques and Terminology

In most species of the morphologically monotonous genus *Anisops*, only the males possess adequate structural characters for specific separation. The characters and terminology used in the key to species are, for the most part, self-explanatory or indicated in the illustrations. The reader, however, should be familiar especially with the method used in making the various measurements.

All measurements were made with a linear scale micrometer disk inserted into the focusing eyepiece of the microscope. The measurements of the head and pronotum have been made from above the dorsal surface of the specimen when held in a horizontal position with the transverse and longitudinal axes horizontal. In the descriptions of new species, the length of the rostral prong is determined by placing the specimen in such a position that this structure is horizontal. The measurement is then made from the base of the rostral prong to the apex along a median longitudinal line. The length of the third rostral segment is measured along the frontal surface. However, since some species appearing in the key were not available to me, I have had to rely on the states of specific characters as provided by Brooks (1951) and other authors to incorporate into the key (a greatly reduced version of the Brooks key to include only the Namibian and South

African species). However, Brooks employed a different technique in measuring the rostral prong and third rostral segment. Brooks measured the length of the rostral prong from the *base* of the third rostral segment to the apex of the prong along the *posterior* margin of the latter and he measured the third rostral segment along its *posterior* margin. His method must be followed in order for the reader to correctly use my key.

When it is necessary to make observations of the stridulatory comb or chaetotaxy of the front tibia of the male, the leg should be removed and cleared in a 10% solution of caustic potash.

A brief terminology explaining selective characters in the key and descriptions that might not be familiar to the reader is as follows:

Anterior width of vertex—width of interocular space lying between the anterior margins of the eyes as viewed from above.

Facial tubercle (tylus)—that portion of the frons immediately above the labrum.

Rostral prong—the pair of projections borne on the third rostral segment, one on each side.

Synthlipsis—the narrowest dorsal portion of the interocular space immediately anterior to the pronotum.

Stridulatory ridge—the expanded portion of the inner basal surface of the anterior tibia of the male bearing the stridulatory comb.

In the species accounts, no attempt has been made to include a complete synonymical bibliography. The reader is directed especially to Brooks (1951) for this information.

Key to the Males of Namibian and South African *Anisops*
(Modified from Brooks 1951)

1	Synthlipsis wide, one third or more the anterior width of vertex	2
—	Synthlipsis narrow, less than one third the anterior width of vertex	14
2(1)	Third rostral segment with prongs	3
—	Third rostral segment without prongs	**aglaia** Hutchinson (RSA)
3(2)	Large species; 8 mm or more in length	4
—	Smaller species; less than 8 mm in length	6
4(3)	Rostral prong longer than third rostral segment; approximately 18 teeth in stridulatory comb; 8,0–8,5 mm in length (Figs 4–6)	**arnoldi** sp. n. (N)
—	Rostral prong shorter than third rostral segment; 20 to 24 teeth in stridulatory comb; more than 9,0 mm in length	5
5(4)	Rostral prong originates distally on third rostral segment; 22 to 24 teeth in stridulatory comb; 9,0–10,0 mm in length	**pellucens** Gerstaecker (RSA)
—	Rostral prong originates proximally on third rostral segment; approximately 20 teeth in stridulatory comb; approximately 9,0 mm in length	**komghai** Reichart (RSA)
6(3)	Facial tubercle (tylus) with median carina or excavate	7
—	Facial tubercle flat or slightly swollen	9
7(6)	Facial tubercle laterally compressed with median carina	**jaczewskii** Hutch. (RSA)
—	Facial tubercle excavate	8

8(7) Fore femur greatly enlarged dorso-ventrally just before base; more than 6 mm in length .... **hancocki** Hutch. (N & RSA)

— Fore femur not greatly enlarged; less than 6 mm in length .... **psyche** Hutch. (N & RSA)

9(6) More than 20 teeth in stridulatory comb; rostral prong shorter than third rostral segment .... **varia** Fieber (N & RSA)

— Less than 20 teeth in stridulatory comb; rostral prong equal to or longer than third rostral segment 10

10(9) Rostral prong longer than third rostral segment 11

— Rostral prong equal to third rostral segment 12

11(10) Inner surface of fore tarsus with short row of four setae; 6 mm or less in body length .... **praetexta** Hutch. (RSA)

— Inner surface of fore tarsus with long row of five setae; more than 6 mm in body length .... **ares** Hutch. (N & RSA)

12(10) Stridulatory comb with more than 15 teeth, decreasing in length at apex; body length 4,0 to 4,8 mm .... **apicalis** Stål (N)

— Stridulatory comb with less than 15 teeth, all of equal length or with apical teeth longer than basal; body length 4,9 to 6,0 mm 13

13(12) Inner surface of fore tarsus with median row of three small setae; stridulatory comb with apical teeth longer than basal. **kampalensis** Hutch. (RSA)

— Inner surface of fore tarsus without median row of small setae; stridulatory comb with teeth of equal length .... **amaryllis** Hutch. (RSA)

14(1) Interocular space produced anteriorly into a cephalic projection .... **sardea** Herrich-Shaffer (N & RSA)

— Interocular space not produced anteriorly into a cephalic projection .. 15

15(14) Stridulatory ridge transversely striated 16

— Stridulatory ridge not transversely striated 17

16(15) Facial tubercle (tylus) with faint median depression; rostral prong rounded at apex .... **graciloides** Brooks (N & RSA)

— Facial tubercle without median depression; rostral prong accuminate at apex .... **gracilis** Hutch. (RSA)

17(15) longer claw of front leg more than one half the length of front tarsus .... **poweri** Hutch. (RSA)

— Longer claw of front leg less than one half the length of front tarsus ... 18

18(17) Large species, 8 mm or more in body length; facial tubercle impressed at sides .... **letitia** Hutch. (RSA)

— Smaller species, 7 mm or less in length; facial tubercle not impressed at sides 19

19(18) Body length less than 5,5 mm; rostral prong equal in length to third rostral segment 20

— body length more than 5,5 mm; rostral prong longer than third rostral segment 21

20(19) Facial tubercle (tylus) flat; stridulatory comb with 20 or more teeth; an internal patch of dense and capitate setae on anterior trochanter .... **krugeri** Poisson (RSA)

— Facial tubercle moderately to slightly swollen; stridulatory comb with less than 15 teeth; anterior trochanter without patch of capitate setae .... **hypatia** Hutch. (RSA)

21(19) Rostral prong originates from point midway to near distal end of third rostral segment; facial tubercle flat; stridulatory comb with less than 15 teeth (Figs 1–3) .... **londti** sp. n. (RSA)

— Rostral prong originates proximally on third rostral segment; facial tubercle slightly swollen; stridulatory comb with 18 or more teeth 22

22(21) Stridulatory comb of approximately 21 teeth that decrease slightly in length from base to apex, with widest teeth at base .... **debilis** Gerstaecker (N & RSA)

— Stridulatory comb of approximately 22 teeth that increase in length at the middle, with teeth of approximately same width ... **balcis** Hutch. (RSA)

Species accounts

As previously mentioned, the impetus for this study resulted from a collecting trip to Namibia and the Republic of South Africa during the month of October, 1981. It is worthy of note that unusual weather conditions during this period hampered collecting. Namibia was experiencing the most severe drought in seventy years according to local accounts. This restricted collecting almost entirely to impounded water in farm stock tanks. By contrast, unreasonable heavy rains inhibited collecting in most of the Republic of South Africa.

Except where otherwise noted, the data on distribution recorded from the literature are from Brooks (1951), Hutchinson (1929), and Poisson (1957 1966).

Anisops Spinola, 1840

Type-species: *A. sardea* Herrich-Shaffer

Brooks (1951) aptly states, "the geographical range of *Anisops* extends throughout Africa, Madagascar and neighboring islands, the Mediterranean area, extending eastward to the islands of the South Pacific, thence northward into China and Japan, with *A. sardea* carrying its range along the entire eastern coast of China".

Anisops aglaia Hutchinson, 1929

Anisops aglaia Hutchinson, 1929; *Ann. S. Afr. Mus.* **25**(3): 404–406, figs.

A fusiform species with males measuring 5,9 mm in length and females 6,6 mm. General facies is testaceous in colour. This is the only species of *Anisops* that lacks rostral prongs on the third rostral segment of the male.

Distribution: Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* 32 km N Loxton, 3122AB, water tank and scrub, 1530 m, 3 specimens, 13.xi.1986, J. Londt and C. Quickelberge.

Records from the literature: SOUTH AFRICA: *Cape Province:* Wynberg Reservoir, Table Mnt., 16.x.1926, L. M. Stark; Mowbray, Cape Flats, 21.i.1927, G. E.

Hutchinson; Crawford Vlei, Cape Flats, 26.1.1926, G. E. Pickford; Alderman's Farm, Firgrove, Cape Flats, 24.v.1926, G. E. Pickford; Steenkamp Puts, 37 mls NW Upington, 28.xi.1950; Cape Peninsula, Cape Point Nature Reserve, 10.xii.1950; Cape Flats, 1 ml E Zeekoevlei, 8.xii.1950; Albert Dist. Stormberg, dam, 28.iv.1928, G. E. Pickford; Wodehouse Dist., Dordrecht, dam, 30.iv.1928, G. E. Pickford; Grahamstown, College House Dam, 6.iii.1926, G. E. Pickford; Roxana Vlei, 21.i.1927, C. F. Mobray. *Transvaal:* Randfontein Dam, 8.v.1927, G. E. Hutchinson; Boksburg Dist., Rietfontein, 27.iv.1928, G. E. Hutchinson; Lake Chrissie, 26.ii.1928, G. E. Hutchinson; Blaauwwater, pans nr Lake Chrissie, 27.ii.1928, G. E. Hutchinson; Breyten, Bothasrust Pan, 27.ii.1928, G. E. Hutchinson.

Anisops amaryllis Hutchinson, 1928

Anisops amaryllis Hutchinson, 1928; *Ann. Mag. Nat. Hist.* **1**(10): 258.

A small, subfusiform species with males measuring 5,4–6,0 mm in length and females 5,3–6,3 mm. General facies testaceous in colour. This species appears to be closely related to *A. eros* Hutchinson from Uganda. In southern Africa *A. amaryllis* may be superficially confused with *A. psyche* from which it may be distinguished by possessing a simple and relatively flat facial tubercle. *A. psyche* has a deeply and widely excavated facial tubercle.

Distribution (from the literature); Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* Cape Peninsula, Cape Point, Nature Reserve, 10.xii.1950.

Anisops kampalensis Hutchinson, 1928

Anisops kampalensis Hutchinson, 1928; *Ann. Mag. Nat. Hist.* **1**(10): 162.

A small, robust subfusiform species with males measuring 4,9–6,0 mm in length. Hutchinson, as well as other authors, does not record a measurement for females of this species. General facies grayish-white to black in colour. This species appears to be closely allied to *A. adonis* Hutchinson from Sudan, Nigeria and Senegal, however, the males lack the carinate frons of the latter species according to Brooks (1951).

Distribution (from the literature): Not recorded for Namibia. SOUTH AFRICA: *Natal:* Royal Natal National Park, 1–5.iv.1951.

Anispos apicalis Stål, 1855

Anisops apicalis Stål, 1855; *Ofversigt at Kongl. Vetenskaps-Akademines Fordhandlinger.* **12**: 89.

A small robust, fusiform species with males measuring 4,0 mm in length and females 4,5 mm. General facies stramineous in colour. This is the smallest species in southern Africa. The very short hind tarsus, greatly reduced scutellum and brachypterous wings and hemelytra will distinguish this from all other South African and Namibian species.

Distribution (from the literature): Not recorded for South Africa. NAMIBIA: Caprivi Strip, Kabulabula Vlei nr Linyanti river, 16.vii.1927, G. E. Hutchinson, 'Caffraria' (Stål type).

Anisops pellucens Gerstaecker, 1873

Anisops pellucens Gerstaecker, 1873; *In: Von der Decken's Reise in Ost Afrika.* 3(2): 424.

A large fusiform species with males measuring 9,0–10,0 mm in length and females 9,6–10,9 mm. General facies stramineous or gray in colour. This species together with *A. letitia* and *A. komghai* are the three largest species known from South Africa. Although *A. pellucens* is only slightly larger than *letitia* and *komghai*, it can readily be distinguished from the two by the fact that it has the posterior margin of the pronotum concave rather than convex. Also, the rostral prong originates distally on the third rostral segment in *pellucens* rather than proximally as in *komghai*.

Distribution (from the literature): Not recorded for Namibia. SOUTH AFRICA: *Transvaal:* Kruger National Park, Skukuza, 31.iv.1951; Kruger National Park, Leeu (Lion) Pan, 15 mls NE Skukuza, 1.v.1951.

Anisops komghai Reichart, 1980

Anisops komghai Reichart, 1980; *Jr. Kansas Ent. Soc.* **53**(3): 622–624.

A large subfusiform species with the male measuring 9,4 mm in length and the female 8,9 mm. Only two specimens, a male and female, were at the disposal of Reichart. General facies grayish-stramineous in colour. This species appears to be closely allied to the preceding species, *A. pellucens*, and according to Reichart, keys to *pellucens* in Brooks's 1951 monograph. However, it differs from *pellucens* in being less robust, having the posterior margin of the pronotum convex, and having the rostral prong originating proximally on the third rostral segment rather than distally.

Distribution (from the literature): Not recorded for Namibia. SOUTH AFRICA: Cape Province: Komgha [=Komga] Dist., 19.iii.1955, J. Omer-Cooper.

Anisops varia Fieber, 1851

Anisops varius Fieber, 1851; *Abhand. Kongl. Boh. Gesell. Wiss.* **5**(7): 483–484.
Anisops varia, Puton, 1899; *Rev. Ent.* **68**: 80.

A subfusiform species with males measuring 6,0–6,2 mm in length and females 6,0–6,6 mm. This species is extremely variable in colour, ranging from generally testaceous to gray-black. This variation is compounded by the very slow development of colour after the last ecdysis, even though the integument is entirely hardened. Another character that is somewhat variable is the length and origin of the rostral prong on the third rostral segment.

A. varia is a widely distributed species occurring throughout Africa. It is found in a wide variety of southern African habitats from the desert and poor steppe regions of Namibia to the subtropical region of Natal and occurs from near sea-level in the Cape Province to high elevations in the Drakensberg mountains of Natal. Further study will probably show that this species is a composite. It can only be identified by using a combination of characters including rostral prong, stridulatory comb, shape of fore femur and chaetotaxy of the male foreleg. This species is very similar to *A. ares* but can be separated by comparison of the character combination mentioned above.

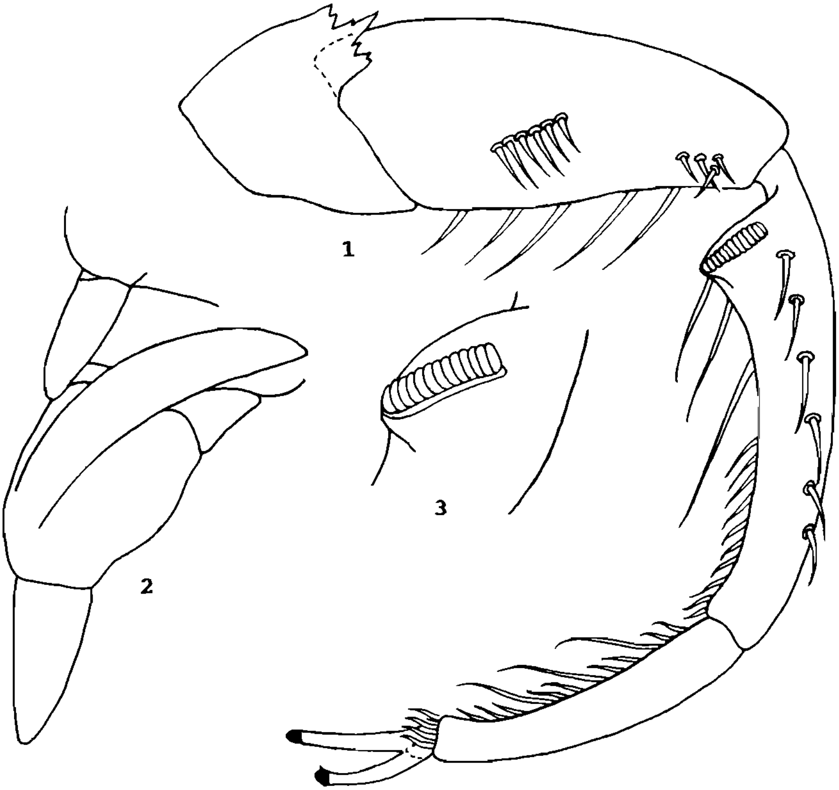
Distribution: NAMIBIA: Otjiwarongo Dist., 50 km ESE Otjiwarongo, Okosongomingo Farm No. 149, 45 specimens, 15.xi.1972, C. L. Hogue; 15 km NW Otjiwarongo, 28 specimens, stock watering tank, 5.x.1981, F.S.T. & C.L.H.; 47 km SE Otjiwarongo, 2 specimens, water reservoir, 19.iii.1984, J. Londt & B. Stuckenberg; Tsumeb Dist., 18 km SW Tsumeb, 26 specimens, stock watering tank, Van Stadden Farm "Oasis", 7.x.1981, F.S.T. & C.L.H.; Rehoboth Dist., 7 km N Kakrand, 64 specimens, stock watering tank, 8.x.1981, F.S.T. & C.L.H.; Karasburg, arid Karoo-type vegetation, 11 specimens, 28.viii.1983, J. Londt & B. Stuckenberg; Bethanie Dist., 25 km WNW Helmeringhausen, Barby Farm no. 26, 40 specimens, 7.x.1972, C. Hogue; Karibib Dist., 47 km S Wilhelmstal, Okandukaseibe Farm No. 27, 36 specimens, 1.xi.1972, C. Hogue; Windhoek Dist., 110 km E Windhoek, Arnhem Farm No. 222, 21 specimens, 26.x.1972, C. Hogue; Grootfontein Dist., 40 km WNW Grootfontein, Gaub Farm No. 47, 29 specimens, 21.xi.1972. C. Hogue. SOUTH AFRICA: *Cape Province*: 13 km E Paarl, Mountain Shadows Farm, concrete water reservoir, 14.x.1981, F.S.T. & C.L.H.; 19 km W Swellendam, rock-bottomed pond, 16.x.1981, F.S.T. & C.L.H.; 13 km NW Mossel Bay, flooded depression at edge of farm, 17.x.1981, F.S.T. & C.L.H.; 6 km NE Forestry station office, Longmore State Forest, roadside pond, 19.x.1981, F.S.T. & C.L.H.; Loerie State Forest, Staaden Mts., small stream, 19.x.1981, F.S.T. & C.L.H.; 15 km SE Lady Gray, stock watering tank, 22.x.1981, F.S.T. & C.L.H.; 32 km N Loxton, 3122AB, 1530 m, water tank and scrub, 13.xi.1986, J. Londt & C. Quickelberg; Clifton Farm, 22 km NW Grahamstown, 3326AB, arid area, 3&5.1.1986, J. & B. Londt & D. Gess.; Mountain Zebra Nat. Park, 3225AD, Bushveld vegetation, 1986, J. Londt; Grahamstown, 3326AD, Botanical Gardens in ornamental ponds, 5.i.1986, J. Londt. *Natal:* Royal Natal National Park, Drakensberg Mts., hotel swimming pool, 27.x.1981, F.S.T. & C.L.H.; Cathedral Peak area, Ukhahlamba Res. Stn., above 1700 m, 10–13.vii.1984, J. Londt; Spioenkop, 3–6.x.1981, J. & A. Londt; Bishopstowe, nr Pietermaritzburg, 11.ii.1981, J. Londt. *Transvaal: ca* 20 km N Graskop, 1 km N Wonderview, 2430DB, 16.ix.1986, J. Londt & B. Stuckenberg.

Records from the literature: NAMIBIA: Kaokoveld, Kowares, 90 mls SE Ohopoho, 3.vi.1951; Kaokoveld, Ohopoho, 4.vi.1951; Kaokoveld, Gauko-Otavi (Kaoko-Otavi), 20 mls SSW Ohopoho, 5.vi.1951; Kaokoveld, Sanitatas, about 85 mls WSW Ohopoho, 14–16.vi.1951, (vide R. A. Poisson, 1957); "Namaqualand, Great Karasberg, (Schultze); Damaraland, Otjituo, (M. Exp.); Chamis, Bersheba, (Schultze)", (vide A. J. Hesse). SOUTH AFRICA: All four Provinces of this Republic.

Anisops londti sp. n.

Figs 1–3

Diagnosis: A species of moderate size that varies in colour from testaceous to gray. As in most species of *Anisops*, there is no single character distinguishing this species. However, short pronotum, 13 teeth in stridulatory comb, moderate size of rostral prong and chaetotaxy of male foreleg will separate this species from all others. This species resembles *A. varia* both in colour variants as well as in structural characteristics. Examination of male, however, will show distinct



Figs 1–3. *Anisops londti* sp. n. 1. Inner surface of ♂ left foreleg. 2. Left lateral view of ♂ rostrum and facial tubercle (tylus). 3. Enlarged view of left tibial stridulatory comb.

differences. This species differs from *A. varia* in having a distinctly shorter pronotum and without a median sulcus (head is half length of pronotum in *A. varia* whereas head is approximately three fourths length of pronotum in *A. londti*). Also, there are 13 teeth in stridulatory comb whereas in *varia* there are at least 21.

Size: ♂, length 6,6–6,9 mm, greatest body width 1,8–1,9 mm; ♀, length 7,0–7,4 mm, greatest body width 2,0–2,5 mm.

Colour: Variable with two colour forms. General facies pale testaceous to gray. Eyes brown. In pale specimens, head, thorax and limbs generally testaceous with portions of thoracic venter and anterolateral area of metathorax brown. Scutellum stramineous (occasionally anterolateral areas brown). Hemelytra hyaline but generally appearing gray as it overlies black abdominal dorsum. In dark specimens, head, pronotum, most of thoracic venter, and limbs testaceous. Pronotum may have posterior portion hyaline but appearing black due to underlying surface of scutellum. Scutellum black except apex and lateral margins orange. Meso- and metathoracic dorsum brown. Abdomen black except ventral keel and portions of connexivum testaceous. General facies of dark form appears gray due to dark brown thorax and black abdomen showing through hyaline hemelytra.

Male structural characteristics: As viewed from above, outline of head laterally rounded, anteriorly truncate with vertex slightly indented; greatest width of head approximately five times anterior width of vertex and less than humeral width of pronotum; synthlipsis slightly less than one third anterior width of vertex; along median longitudinal axis, head approximately three fourths length of pronotum; notocephalon not sulcate dorsally; tylus flat; labrum with basal width slightly greater than its median length and apex bluntly rounded; rostral prong (Fig. 2) distinctly longer than third rostral segment, with base originating laterally at a point midway to near distal end of third rostral segment, and with apex accuminate. Pronotum with its median length less than half its humeral width; disk unimpressed; lateral margins divergent; posterior margin convex, medianly concave. Scutellum large, with median length distinctly greater than that of pronotum. Fore femur (Fig. 1) neither wide nor thickened at apex. Fore tibia with stridulatory comb (Fig. 3) consisting of approximately 13 teeth, all about equal thickness and width. Chaetotaxy of male front leg as shown in Fig. 1.

Female structural characteristics: As viewed from above, outline of head laterally rounded, somewhat truncate anteriorly; greatest width of head aproximately four and one half times anterior width of vertex and less than humeral width of pronotum; synthlipsis slightly more than half anterior width of vertex; along median longitudinal axis, head slightly more than half length of pronotum; notocephalon not sulcate dorsally; tylus flat. Pronotum with its median length less than half its humeral width; disk unimpressed; lateral margins divergent; posterior margin convex, medianly concave. Scutellum large with median length distinctly greater than that of pronotum.

Location of types: Holotype ♂, allotype ♀, 2 ♂ and 2 ♀ paratypes, Cathedral Peak area, Natal, South Africa, 10–13.vii.1984, J. G. H. Londt, in the Natal Museum, Pietermaritzburg, Natal, South Africa (NM Type No. 18). 7 ♂ 14 ♀ paratypes, data as above, in the Natural History Museum of Los Angeles County, Los Angeles, California, U.S.A.

Distribution: Known only from type locality.

Etymology: This species is named for Dr Jason Londt of the Natal Museum in grateful appreciation for his help during the expedition and for his continuing interest and cooperation relative to my study of the genus *Anisops*.

Anisops jaczewskii Hutchinson, 1928

Anisops jaczewskii Hutchinson, 1928; *Ann. Mag. Nat. Hist.* **1**(10): 304.

A small subfusiform species with males measuring 4,5–5,0 mm in length and females 4,8–5,6 mm. General facies yellowish-gray in colour. This species appears to be closely related to *A. adonis* Hutchinson from Nigeria and Sudan. In southern Africa *A. jaczewskii* may be superficially confused with the other small species, *A. apicalis*, known only from the Caprivi Strip, Namibia. However, it is readily distinguishable from *apicalis* by being robust and not possessing the greatly reduced scutellum and hind tarsus.

Distribution (from the literature): Not recorded for Namibia. SOUTH AFRICA: *Transvaal:* Limpopo River, Main Drift nr Messina, 28.v.1927, G. E. Hutchinson.

Anisops psyche Hutchinson, 1928

Anisops psyche Hutchinson, 1928; *Ann. Mag. Nat. Hist.* **1**(10): 159–160.

A small fusiform species with males measuring 5,5 mm in length and females 5,7 mm. General facies grayish-yellow in colour. This species is closely allied to *A. hancocki* Hutchinson, from which it differs by not having the fore femur of the males greatly expanded dorso-ventrally just before the base (Brooks 1951).

Distribution: NAMIBIA: Otjiwarongo Dist., 50 km ESE Otjiwarongo, Okosongomingo Farm No. 149, 3 specimens, 15.xi.1972, C. L. Hogue.

Records from the literature: NAMIBIA: Kaokoveld, Gauko-Otavi (Kaoko-Otavi), 20 mls SSW Ohopoho, 5.vi.1951; Kaokoveld, Sanitatas, about 85 mls WSW Ohopoho, 14–16.vi.1951. SOUTH AFRICA: *Transvaal:* Louis Trichardt Dam, 26.v.1927, G. E. Hutchinson.

Anisops praetexta Hutchinson, 1929

Anisops praetexta Hutchinson, 1929; *Ann. S. Afr. Mus.* **25**(3): 402–403.

A small fusiform species with males measuring 5,4–6,0 mm in length and females 5,1–6,5 mm. General facies grayish-white to light brown in colour. It is very similar to *A. amaryllis* Hutchinson but can be distinguished from it by having a more irregular stridulatory comb on the male fore tibia and a short row of small setae on the basal inner surface of the male fore tarsus not found in *amaryllis*.

Distribution (from the literature): Not recorded for Namibia. SOUTH AFRICA: *Transvaal:* Louis Trichardt Dam, 24.v.1927, G. E. Hutchinson; Messina, Limpopo River nr Main Drift, 28.v.1927, G. E. Hutchinson.

Anisops arnoldi sp. n.

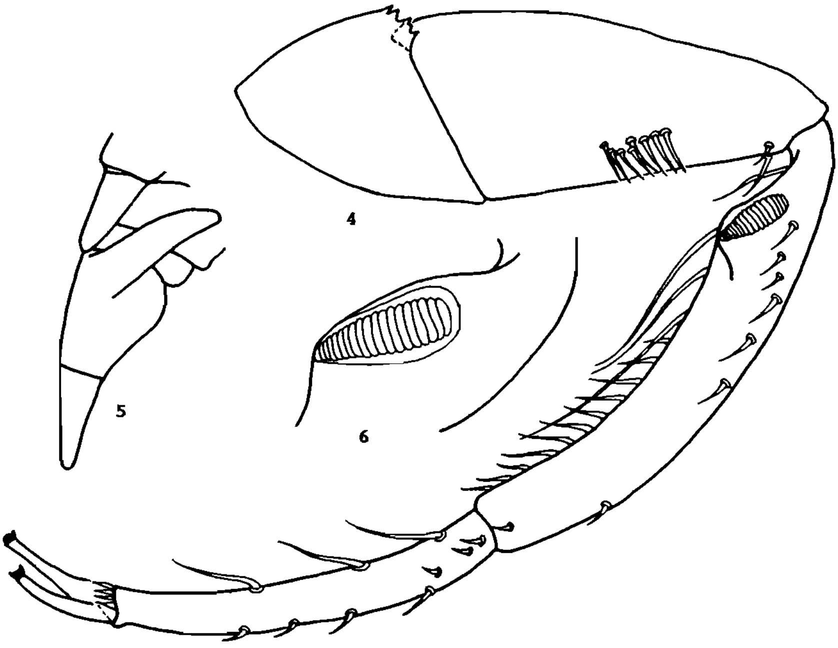
Figs 4–6

Diagnosis: A large robust species, the largest recorded for Namibia. This species most closely resembles *A. grandis* Poisson from Madagascar to which it keys in Brooks (1951). However, *A. arnoldi* is smaller in size, is overall black versus testaceous as in *grandis* and the rostral prong originates near the base of the third rostral segment in *arnoldi*.

Size: ♂, length 8,0–8,5 mm, greatest body width 2,3 mm; ♀, length 8,5–9,1 mm, greatest body width 2,5–2,7 mm.

Colour: General facies nigro-violaceous to black. Eyes brown. Head, thoracic venter and limbs testaceous. Pronotum mostly hyaline, appearing black as it overlies black mesoscutum. Scutellum black or nigro-violaceous, with antero-lateral carinae testaceous. Abdomen black except ventral keel and most of connexivum and terminal segment testaceous.

Male structural characteristics: As viewed from above, outline of head laterally rounded, anteriorly truncate with vertex indented; greatest width of head five and one half times anterior width of vertex and less than humeral width of pronotum; synthlipsis wide, half anterior width of vertex; along median longitudinal axis, head one half length of pronotum; notocephalon sulcate dorsally; tylus slightly



Figs 4–6. *Anisops arnoldi* sp. n. 4. Inner surface of ♂ left foreleg. 5. Left lateral view of ♂ rostrum and facial tubercle (tylus). 6. Enlarged view of left tibial stridulatory comb.

inflated; labrum with basal width equal to its median length with apex bluntly rounded, pilose; rostral prong (Fig. 5) longer than third rostral segment, with base originating laterally near base of third rostral segment, and with apex sharply rounded. Pronotum with its median length approximately one half its humeral width; disk unimpressed; lateral margins divergent; posterior margin convex, medianly concave. Scutellum large, with median length distinctly greater than that of pronotum and with pronounced antero-lateral carinae. Fore femur (Fig. 4) neither wide nor thickened at apex. Fore tibia with wide stridulatory comb (Fig. 6) consisting of approximately 18 teeth, distal teeth much narrower than basal but all of equal thickness. Chaetotaxy of front leg as shown in Fig. 4.

Female structural characteristics: As viewed from above, outline of head laterally rounded, truncate anteriorly; greatest width of head approximately five and one half times the anterior width of vertex and distinctly less than humeral width of pronotum; synthlipsis half anterior width of vertex; along median longitudinal axis, head approximately half length of pronotum; notocephalon sulcate dorsally; tylus slightly inflated. Pronotum with median length less than half its humeral width; disk unimpressed; lateral margins divergent; posterior margin convex, medianly concave. Scutellum large, with median length distinctly greater than that of pronotum and with pronounced anterolateral carinae.

Location of types: Holotype ♂, allotype ♀, 1 ♂ and 6 ♀ paratypes, Tsumeb District, 18 km SW Tsumeb, Van Stadden Farm "Oasis", Namibia, 7.x.1981, F. S. Truxal and C. L. Hogue, in the collections of the Natural History Museum of Los

Angeles County, Los Angeles, California, 2 ♀ paratypes in the Natal Museum, Pietermaritzburg, Natal, South Africa. 2 ♂, 2 ♀ paratypes, Grootfontein District, 40 km WNW Grootfontein, Gaub Farm No. 47, 21.xi.1972, C. L. Hogue, in the Natural History Museum of Los Angeles County and 1 ♂, 2 ♀ paratypes in the Natal Museum (NM type No. 17).

Distribution. Known only from the type-localities.

Etymology. This species is named for Mr Leon G. Arnold of the Natural History Museum of Los Angeles County in grateful appreciation for his forsight and ability in bringing the 1981 Namibia-South African Expedition to fruition.

Anisops hancocki murati Poisson, 1939

Anisops hancocki Hutchinson, 1928; *An. Mag. Nat. Hist.* **1**(10): 163–164.
Anisops murati Poisson, 1939; *Bull. Soc. Ent. Fr.* **44**:43.
Anisops hancocki Brooks, 1951; *Univ. Kansas Sci, Bull.* **34**(1) no. 8: 399–400. (establishes *murati* as synonym).

A relatively small fusiform species measuring 6,3–7,0 mm in length (Poisson does not indicate size relative to sex). General facies gray. In establishing the two subspecies, *A. hancocki hancocki* and *A. hancocki murati*, Poisson differentiates the two by the following characteristics. *A. h. hancocki* is 8–8,5 mm in length *vs* 6,3–7 mm for *A. h. murati*; in colour, whitish-gray for the former *vs* darker gray for the latter and a difference in chaetotaxy of the fore tibiae in the males of the two subspecies. Brooks (1951) states that *A. hancocki* Hutchinson is very similar to *A. psyche* Hutchinson but "differs from it by having the fore femur of the male greatly enlarged dorso-ventrally just before the base, a condition lacking in *A. psyche*".

Distribution (from the literature, Poisson 1957): NAMIBIA: Kaokoveld, Kowares, 90 mls SE Ohopoho, 3.vi.1951; Kaokoveld, Gauko-Otavi (Kaoko-Otavi), 20 mls SSW Ohopoho, 5.vi.1951; Kaokoveld, Sanitatas, about 85 mls WSW Ohopoho, 14–16.vi.1951. SOUTH AFRICA: *Cape Province:* Cape Peninsula, Cape Point, Nature Reserve, 10.xii.1950; 2 mls S Bredasdorp, 30.xii.1950. *Natal:* Albert Falls, Umgeni River, 13 mls E Pietermaritzburg, 13.iv.1951.

Anispos ares Hutchinson, 1928

Anisops ares Hutchinson, 1928; *Ann. Mag. Nat. Hist.* **1**(10): 164–166.

A robust and slightly fusiform species with males measuring 6,5–7,1 mm in length and females 6,0–6,3 mm. This species has two colour forms. The light form is stramineous in general facies, while the dark form appears, in general, brown to black. This species may be confused with *A. varia* but males may be separated easily. In *varia* the pronotum is shorter than that of *A. ares* and in *ares* there are only approximately 11 teeth in the stridulatory comb versus 21–25 in *varia*.

Distribution: NAMIBIA (first record): Mariental Dist., Gochas, 47 specimens, concrete water storage tank, 8.x.1981, F. S. T. & C. L. H.; Gochas, School swimming pool, 4 specimens, 9.x.1981, F.S.T. & C.L.H.; Bremen Farm (Boltman), 31 km S Gochas, stock watering tank, 31 specimens, 9.x.1981, F.S.T. & C.L.H.;

Haruchas Farm (Berger), 14 km S Gochas, stock watering tank, 4 specimens, 9.x.1981, F.S.T. & C.L.H. SOUTH AFRICA: *Cape Province:* Longmore State Forest, 6 km Forestry Station Office, road-side pond, 8 specimens, 19.x.1981, F.S.T. & C.L.H.

Records from the literature (Brooks 1951): SOUTH AFRICA: *Natal:* Mahira Forest, ix.1920, R. A. Drummer.

Anisops sardea Herrich-Shaffer, 1849

Anisops sardeus Herrich-Shaffer, 1849; *Die Wanzenartigen Insecten* **13**: 40–41, fig. 904.
Anisops sardea, Kirkaldy, 1904; *Wiener Ent. Zeit.* **23**: 114–116.

A slender subfusiform species with males measuring 7,5–8,5 mm in length and females, 7,2–7,5 mm. In general facies testaceous in colour. *A. sardea* is closely related to *A. bouvieri* Kirkaldy, which does not occur in Africa. This is the only African species that has the interocular space produced into a prominent cephalic horn. It is widely distributed throughout Africa.

Distribution: NAMIBIA: Tsumeb Dist. 18 km SW Tsumeb, Van Stadden farm "Oasis", stock watering tank, 10 specimens, 7.x.1981, F.S.T. & C.L.H.; Rehoboth Dist., 7 km N Kalkrand, stock watering tank, 7 specimens, 8.x.1981, F.S.T. & C.L.H.; Bethanie Dist., 25 km WNW Helmeringhausen, Barby Farm No. 26, 1 specimen, 7.x.1972, C. L. Hogue. SOUTH AFRICA: *Cape Province:* 13 km E Paarl, Mountain Shadows Farm, concrete water reservoir, 3 specimens, 14.x.1981, F.S.T. & C.L.H.; 13 km W Mossel Bay, flooded depression at edge of agricultural field, 1 specimen, 17.x.1981, F.S.T. & C.L.H.; 22 km NW Grahamstown, Clifton Farm, 3326AB, 3 specimens, 3 & 5.i.1986, J. & B. Londt & D. Gess. *Natal:* Montrose, Pietermaritzburg, swimming pool, 5 specimens, 31.i.1984, J. Londt.

Records from the literature: NAMIBIA: Kaokoveld, Sanitatas, about 85 mls WSW Ohopoho, 14–16.vi.1951 (Poisson 1957); Otjituo; Onoolonga, Ovamboland; Kuisib region, Damaraland (Hutchinson 1929). SOUTH AFRICA: *Cape Province:* Obobogorop, 120 mls NW Upington, 14–19.xi.1950; Kober Dam, Setagoli Dist., i.1927, B. Lamb. *Natal:* Durban. *Transvaal:* Rietfontein, Boksburg Div., large pan, 27.iv.1928, G. E. Hutchinson; Brakpan, Boksburg Div., 6.v.1928 & 9.vi.1928, G. E. Hutchinson; Plat River, Waterberg Dist. 6–18.iv.1905, C. Swierstra; Limpopo River, nr Messina, pool and backwater, 27–29.v.1927, G. E. Hutchinson.

Anisops graciloides Brooks, 1951

Anisops graciloides Brooks, 1951; *Univ. Kans, Sci. Bull.* **34** (1) No. 8: 434–435, figs.

A slender, fusiform species with males measuring 7,0–8,2 mm in length and females 7,5 mm. In general facies this species is testaceous in colour. *A. graciloides* is closely related to *A. gracilis* Hutchinson from which it can be separated by the fact that the males of *graciloides* have the facial tubercle slightly compressed laterally and with a slight median depression.

Distribution: NAMIBIA: (first record): Mariental Dist., slow-moving stream just north of Hardap Dam, Fish River, 22 specimens, 9.x.1981, F.S.T. & C.L.H. SOUTH AFRICA (first record): *Natal:* Royal Natal National Park, Riverine bush, Montane slopes, 4 specimens, 6–10.xii.1984, J. Londt.

Anisops gracilis Hutchinson, 1929

Anisops gracilis Hutchinson, 1929; *Ann. S. Afr. Mus.* **25** (3): 386–388, figs.

A slender, fusiform species with males measuring 6,9–7,0 mm in length and females 8,0 mm. In general facies this species is stramineous in colour. *A. gracilis* is closely related to *A. graciloides* from which it can be separated by the slightly raised facial tubercle lacking the median depression found in *graciloides.*

Distribution: Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* Grahamstown, Botanical Gardens in ornamental ponds, 3326AD, 7 specimens, 5.i.1986, J. Londt.

Records from the literature: SOUTH AFRICA: *Cape Province:* Cape Flats, between Strandfontein and Muizenberg, 8.xii.1950; 7 mls SW Bredasdorp, 30.xii.1950 (Poisson 1957); Durbanville, Cape Flats, dam, 30.iv.1927, L. M. Starke; Wellington, ponds, 15.v.1927, L. M. Stark; Swellendam, dam and pond, 12.xii.1926, G. E. Hutchinson; Oudtshoorn, dam, 28.xii.1926, G. E. Hutchinson; George, dam, 26.xii.1926, L. M. Starke; Knysna, pond at Concordia, 23.xii.1926, G. E. Hutchinson; Assegaibosch, stream, 12.i.1926, G. E. Pickford; Grahamstown, College House, dam, 6.iii.1926, G. E. Pickford; Alice, vlei at S.A. Native College Farm, 23.ii.1926 (types), G. E. Pickford; Pirie, Mission, stream, 3.iii.1926, G. E. Pickford; King Williamstown, Buffalo river, 12.ii.1926, G. E. Pickford; East London, stream below Native Location, 13.ii.1926, G. E. Pickford; East London, pond in park, 15.ii.1926, G. E. Pickford. *Transvaal:* Barberspan, 6.iv.1926, G. E. Hutchinson; Potchefstroom, 25.iii.1928, G. E. Hutchinson; Florida, lake, 12.ii.1927, G. E. Hutchinson; Yukskei River, dam nr Johannesburg–Pretoria Road, 27.ii.1927, G. E. Hutchinson; Birchleigh, dam, 28.iv.1928, G. E. Hutchinson; Louis Trichardt, dam, 24.v.1927, G. E. Hutchinson; Limpopo River, Main Drift and Gorge nr Messina, 27–29.v.1927, G. E. Hutchinson.

Anisops poweri Hutchinson, 1929

Anisops poweri Hutchinson, 1929; *Ann. S. Afr. Mus.* **25** (3): 389–390, figs.

A small fusiform species with males measuring 5,7–6,8 mm in length and females 6,3–7,1 mm. In general facies stramineous in colour. *A. poweri* is closely allied to *A. leesonia* Hutchinson from Zimbabwe, and is the only other species of this genus that possesses long claws on the male front leg. The facial tubercle of *poweri* is also greatly swollen.

Distribution: Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* 3 km E Lady Gray, small rocky stream immediately below dam, 3 specimens, 22.x.1981, F.S.T. & C.L.H.; 15 km SE Lady Gray (highway R58), stock watering tank, 12 specimens, 22.x.1981, F.S.T. & C.L.H.

Records from the literature: SOUTH AFRICA: *Cape Province:* Kimberley, 1.iv.1912, (types), Power; Ceres, pond, 5–6.xii.1927, G. E. Hutchinson; Avontuur, pond, 6.i.1927, G. E. Hutchinson; Wodehouse Dist., Buffelsfontein, 29.iv.1928, G. E. Pickford. *Orange Free State:* Rouxville Dist., Aliwal North, Orange River, 5.v.1928, G. E. Pickford; Rouxville Dist., Knoffelspruit, Orange River, 5.v.1928, G. E. Pickford; Rouxville Dist., Diep Kloof, Orange River, 9.v.1928, G. E. Pickford. *Transvaal:* Rivonia, nr Johannesburg, stream, 10.vi.1928, G. E. Pickford; Yukskei River, dam, on Johannesburg–Pretoria Road, 27.ii.1927, G. E. Hutchinson.

Anisops debilis Gerstaeker, 1873

Anisops debilis Gerstaeker, 1873; *In: von der Decken's Reisen in Ost-Afrika* **3** (2): 425.

A slender, fusiform species with males measuring 5,8–6,8 mm in length and females 6,3–6,8 mm. In general facies testaceous to gray in colour. *A. debilis* appears to be closely allied to a smaller species, *A. vitrea* Signoret, which is found on islands off the east coast of Africa and Madagascar. It can be distinguished from *vitrea* by its larger size, narrow synthlipsis and slightly raised facial tubercle.

Distribution: NAMIBIA: Otjiwarongo Dist., 15 km NW Otjiwarongo, stock watering tank, 2 specimens, 5.x.1981, F.S.T. & C.L.H.; Otjiwarongo Dist. 50 km ESE Otjiwarongo, Okosongomingo Farm No. 149, 1 specimen, 15.xi.1972, C. L. Hogue; Otjiwarongo, 47 km SE Otjiwarongo, 6 specimens, 19.iii.1984, J. Londt & B. Stuckenberg. SOUTH AFRICA: *Transvaal:* Nelspruit, Hotel Shanalanga swimming pool, 3 specimens, 29.x.1981, F.S.T. & C.L.H. *Natal:* Pietermaritzburg, Montrose, 3 specimens, 23.ii.1984, J. Londt.

Records from the literature: NAMIBIA: Kaokoveld, Kowares, 90 mls SE Ohopoho, 3.vi.1951; Kaokoveld, Ohopoho, 4.vi.1951; Kaokoveld, Gauko-Otavi (Kaoko-Otavi) 20 mls SSW Ohopoho, 5.vi.1951; Kaokoveld, Sanitatas, about 85 mls WSW Ohopoho, 14–16.vi.1951. SOUTH AFRICA: *Cape Province:* East London, small stream and park pond, 13–15.ii.1926, G. E. Pickford; Pirie bush, A. N. Stenning; Cape Flats, between Strandfontein and Muizenberg, 8.xii.1950; 2 mls S Bredasdorp, 30.xii.1950; Cape Peninsula, Wilde Vogel Vlei, 3 mls NE Kommetjie, 2.ii.1951. *Natal:* Royal Natal National Park, Tugela Valley, 3.iv.1951. *Transvaal:* Louis Trichardt, dams, 24–26.v.1926, G. E. Hutchinson; Limpopo River, Gorge and Main Drift nr Messina, 27–29.v.1927, G. E. Hutchinson.

Anisops hypatia Hutchinson, 1929

Anisops hypatia Hutchinson, 1929; *Ann. S. Afr. Mus.* **25** (3): 399–400, figs.

A small fusiform species with males measuring 5,2–6,0 mm in length and females 5,7–6,5 mm. General facies testaceous to stramineous in colour. In general appearance this species resembles *A. amaryllis* Hutchinson but the male head is much wider than in *amaryllis* and it possesses a basal row of three small spines on the inner surface of the fore tarsus not found in *amaryllis*.

Distribution: Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* 19 km W Swellendam, in pond, 3 specimens, 16.x.1981, F.S.T. & C.L.H.; Grahamstown, 3326AD, Botanical Gardens in ornamental ponds, 2 specimens, 5.i.1986, J. Londt.

Records from the literature: SOUTH AFRICA: *Cape Province:* Kirstenbosch, Cape Peninsula, 16.x.1926, L. M. Starke; Crawford Vlei, Cape Flats, 26.v.1926, G. E. Pickford; Alderman's Farm, Fir Grove, 24.v.1926, G. E. Pickford; Banhoek Stellenbosch, pond at Bloem Erf., 22.xii.1925, G. E. Pickford; Brink's Farm, between Wellington and du Toit's Kloof, 15.v.1927, L. M. Starke; George, dam, 26.xii.1926, G. E. Hutchinson; Knysna, pond at Veldschoens Drift, 21.xii.1926, (types), G. E. Hutchinson; Concordia, nr Knysna, pond, 23.xii.1926, G. E. Hutchinson; Brackenhill Sta., nr Knysna, pond, 22.xii.1926, G. E. Hutchinson; Alice, vlei on Native College Farm, 23.ii.1926, G. E. Pickford.

Anisops balcis Hutchinson, 1930

Anisops balcis Hutchinson, 1930; *Proc. Zool. soc. London* **29** (2): 447.

A slender and subfusiform species with males measuring 6,8 mm in length and females 6,6 mm (Brooks 1951). General facies testaceous in colour. This species is similar to *A. gracilis* Hutchinson from which it may be distinguished by the lack of the transversely striated stridulatory ridge in the male. Also, the male *gracilis* does not possess the flattened facial tubercle.

Distribution (from the literature, Poisson 1957): Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* Near Kleinmond, 20.xii.1950.

Anisops krugeri Poisson, 1955

Anisops krugeri Poisson, 1955; *Bull. De La Soc. Scient. De Bret.* **30**: 138.
Anisops krugeri Poisson, 1957; *So. Afr. Anim. Life* **4**: 364–366.

R. A. Poisson first described and figured *A. krugeri* in his 1955 paper, "Quelques Hydrocorises nouveaux de l'Afrique du Sud (Mission Suédoise Brinck et Rüdebeck)". Again, in 1957, he described *krugeri* as a new species in his paper, "Hemiptera Heteroptera: Hydrocorisae and Geocorisae—Gerroidea" in South African Animal Life—Results of the Lund University Expedition in 1950–1951. The text concerning this species in the latter paper is more extensive and more figures are presented.

A small fusiform species measuring 5,3 mm (Poisson 1955). General facies pale yellow in colour. The most characteristic feature of this species, according to the author, is a dense patch of capitate bristles on the interior surface of the anterior trochanter of the male. This species evidently is similar to *A. balcis* Hutchinson from which it can be distinguished by the capitate bristles on the anterior trochanter of the male as well as the chaetotaxy of the anterior tibia of the male.

Distribution (from the literature, Poisson 1955, 1957): Not recorded for Namibia. SOUTH AFRICA: *Transvaal:* Kruger National Park, Leeu (Lion) Pan, 15 mls NE Skukuza, 1 specimen (type) in eutrophic freshwater pond, 1.v.1951.

Anisops letitia Hutchinson, 1929

Anisops letitia Hutchinson, 1929; *Ann. S. Afr. Mus.* **25** (3): 385–386, figs.

A large fusiform species measuring 8,0–9,0 mm in length (size relative to sex not indicated). General facies yellowish-white (testaceous) in colour. It superficially resembles *A. pellucens* Gerstaeker, another large species, but *letitia*, according to Hutchinson (1929), can be distinguished by having the posterior border of the hemelytra convex or straight and a very small stridulatory comb. Also, in *A. pellucens*, the pronotum is medianly emarginate (Brooks 1951).

Distribution (from the literature): Not recorded for Namibia. SOUTH AFRICA: *Cape Province:* Howieson's Poort, nr Grahamstown, pool in stream bed, 13.iii.1926, G. E. Pickford.

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REFERENCES

Brooks, George T. 1951. A revision of the genus *Anisops* (Notonectidae, Hemiptera). *University of Kansas Science Bulletin* **34**(1) No. 8: 301-519, pls XXXVI-LVII.

Fieber, F. X. 1851. Rhynchotographieen *Abhandlungen Koniglichen Böhmischen Gesellschaft der Wissenschaften* **5**(7) 469–486.

Hesse, A. J. 1925. Contributions to a knowledge of the fauna of South West Africa IV. A list of the Heteropterous and Homopterous Hemiptera of South West Africa. *Annals of the South African Museum.* **23**(1): 1–179, pls. 1-8.

HUTCHINSON, G. E. 1928. On Notonectidae from Central Africa (Hemiptera–Heteroptera). *Annals and Magazine of Natural History* **1**(10): 155–166.

——— 1929. A revision of the Notenectidae and Corixidae of South Africa. *Annals of the South African Museum* **25**(3): 359–474, pls. 27–41.

POISSON, R. A. 1955. Quelques Hydrocorises nouveaux de l'Afrique du Sud (Mission Suédoise Brinck et Rüdebeck). *Bull. de la Societe Scientifique de Bretagne* **30**: 129–138.

——— 1957. Hemiptera Heteroptera: Hydrocorisae and Geocorisae-Gerroidea. *South African Animal Life:* Results of the Lund University Expedition in 1950–1951. edited by B. Hanstrom *et al.* Stockholm: Almquist & Wiksell. **4**: 357–373.

——— 1966. Catalogue des Insectes Hétéropterès Notonectidae Leach 1815, africano-malgaches. *Bulletin de l'Institut Fondamental d'Afrique Noire ser. A* **28**(2): 729–768.

REICHART, C. V. 1980. A new species of *Anisops* (Hemiptera: Notonectidae) from South Africa. *Journal of the Kansas Entomological Society* **53**(3): 622–624.

STÅL, C. 1865. *Hemiptera Africana.* Holmiae: Officina Norstedtiana **3**: 191.

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